APPROVED JURISDICTIONAL DETERMINATION FORM
U.S. Army Corps of Engineers

This form should be completed by following the instructions provided in Section IV of the JD Form Instructional Guidebook.

SECTION I: BACKGROUND INFORMATION

A. REPORT COMPLETION DATE FOR APPROVED JURISDICTIONAL DETERMINATION (JD): 10 June 2008

B. DISTRICT OFFICE, FILE NAME, AND NUMBER: Detroit District, Novogroder, LRE-1990-1451173 Wetland 2

C. PROJECT LOCATION AND BACKGROUND INFORMATION:
State: Indiana County/parish/borough: Lake City: Merrillville
Center coordinates of site (lat/long in degree decimal format): Lat. 41-27-58.4° N, Long. 87-21-23.2° W.
Universal Transverse Mercator: 16
Name of nearest waterbody: Unnamed Tributary of Turkey Creek
Name of nearest Traditional Navigable Water (TNW) into which the aquatic resource flows: Burns Ditch (Little Calumet River)
Name of watershed or Hydrologic Unit Code (HUC): Little Calumet - Galien Watershed; 04040001
☒ Check if map/diagram of review area and/or potential jurisdictional areas is/are available upon request.
☐ Check if other sites (e.g., offsite mitigation sites, disposal sites, etc…) are associated with this action and are recorded on a different JD form.

D. REVIEW PERFORMED FOR SITE EVALUATION (CHECK ALL THAT APPLY):
☒ Office (Desk) Determination. Date: 23 May 2008
☒ Field Determination. Date(s): 21 April 2008

SECTION II: SUMMARY OF FINDINGS

A. RHA SECTION 10 DETERMINATION OF JURISDICTION.

There **Are no** *"navigable waters of the U.S."* within Rivers and Harbors Act (RHA) jurisdiction (as defined by 33 CFR part 329) in the review area. [*Required*]
☐ Waters subject to the ebb and flow of the tide.
☐ Waters are presently used, or have been used in the past, or may be susceptible for use to transport interstate or foreign commerce.
Explain: .

B. CWA SECTION 404 DETERMINATION OF JURISDICTION.

There **Are** *"waters of the U.S."* within Clean Water Act (CWA) jurisdiction (as defined by 33 CFR part 328) in the review area. [*Required*]

1. **Waters of the U.S.**
   a. **Indicate presence of waters of U.S. in review area (check all that apply):** [1]
      ☐ TNWs, including territorial seas
      ☐ Wetlands adjacent to TNWs
      ☐ Relatively permanent waters[2] (RPWs) that flow directly or indirectly into TNWs
      ☐ Non-RPWs that flow directly or indirectly into TNWs
      ☒ Wetlands directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to but not directly abutting RPWs that flow directly or indirectly into TNWs
      ☐ Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs
      ☐ Impoundments of jurisdictional waters
      ☐ Isolated (interstate or intrastate) waters, including isolated wetlands

   b. **Identify (estimate) size of waters of the U.S. in the review area:**
      Non-wetland waters: linear feet: width (ft) and/or acres.
      Wetlands: ~3.26 acres of wetlands within a site totaling ~20 acres.

   c. **Limits (boundaries) of jurisdiction** based on: **1987 Delineation Manual**
      Elevation of established OHWM (if known): .

2. **Non-regulated waters/wetlands (check if applicable):**[3]
   ☐ Potentially jurisdictional waters and/or wetlands were assessed within the review area and determined to be not jurisdictional.
   Explain: .

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[1] Boxes checked below shall be supported by completing the appropriate sections in Section III below.
[2] For purposes of this form, an RPW is defined as a tributary that is not a TNW and that typically flows year-round or has continuous flow at least "seasonally" (e.g., typically 3 months).
[3] Supporting documentation is presented in Section III.F.

SECTION III: CWA ANALYSIS

A. TNWs AND WETLANDS ADJACENT TO TNWs

The agencies will assert jurisdiction over TNWs and wetlands adjacent to TNWs. If the aquatic resource is a TNW, complete Section III.A.1 and Section III.D.1. only; if the aquatic resource is a wetland adjacent to a TNW, complete Sections III.A.1 and 2 and Section III.D.1.; otherwise, see Section III.B below.

1. **TNW**
   Identify TNW: .

   Summarize rationale supporting determination: .

2. **Wetland adjacent to TNW**
   Summarize rationale supporting conclusion that wetland is "adjacent": .

B. CHARACTERISTICS OF TRIBUTARY (THAT IS NOT A TNW) AND ITS ADJACENT WETLANDS (IF ANY):

This section summarizes information regarding characteristics of the tributary and its adjacent wetlands, if any, and it helps determine whether or not the standards for jurisdiction established under *Rapanos* have been met.

The agencies will assert jurisdiction over non-navigable tributaries of TNWs where the tributaries are "relatively permanent waters" (RPWs), i.e. tributaries that typically flow year-round or have continuous flow at least seasonally (e.g., typically 3 months). A wetland that directly abuts an RPW is also jurisdictional. If the aquatic resource is not a TNW, but has year-round (perennial) flow, skip to Section III.D.2. If the aquatic resource is a wetland directly abutting a tributary with perennial flow, skip to Section III.D.4.

A wetland that is adjacent to but that does not directly abut an RPW requires a significant nexus evaluation. Corps districts and EPA regions will include in the record any available information that documents the existence of a significant nexus between a relatively permanent tributary that is not perennial (and its adjacent wetlands if any) and a traditional navigable water, even though a significant nexus finding is not required as a matter of law.

If the waterbody[4] is not an RPW, or a wetland directly abutting an RPW, a JD will require additional data to determine if the waterbody has a significant nexus with a TNW. If the tributary has adjacent wetlands, the significant nexus evaluation must consider the tributary in combination with all of its adjacent wetlands. This significant nexus evaluation that combines, for analytical purposes, the tributary and all of its adjacent wetlands is used whether the review area identified in the JD request is the tributary, or its adjacent wetlands, or both. If the JD covers a tributary with adjacent wetlands, complete Section III.B.1 for the tributary, Section III.B.2 for any onsite wetlands, and Section III.B.3 for all wetlands adjacent to that tributary, both onsite and offsite. The determination whether a significant nexus exists is determined in Section III.C below.

1. **Characteristics of non-TNWs that flow directly or indirectly into TNW**

   (i) General Area Conditions:
   Watershed size: HUC 04040001 watershed for Trail Creek Partnership is 34624 **acres**
   Drainage area: Drainage for the Deep River Watershed at the confluence with Burns Ditch (Little Calumet River) is 151 acres; the immediate watershed at Turkey Creek is 30 **acres**
   Average annual rainfall: 36.01 inches
   Average annual snowfall: 27.6 inches

   (ii) Physical Characteristics:
   (a) Relationship with TNW:
   ☐ Tributary flows directly into TNW.
   ☒ Tributary flows through **2** tributaries before entering TNW.

   Project waters are **2-5** river miles from TNW.
   Project waters are **1 (or less)** river miles from RPW.
   Project waters are **2-5** aerial (straight) miles from TNW.
   Project waters are **1 (or less)** acrial (straight) miles from RPW.
   Project waters cross or serve as state boundaries. Explain: No.

[4] Note that the Instructional Guidebook contains additional information regarding swales, ditches, washes, and erosional features generally and in the arid West.

Identify flow route to TNW[5]: Waters from the project site wetlands flow north through: 1) wetlands located offsite and to the north 2) man made depression 3) and a 27" storm water sewer. The first 2 waters are deposited into a rectangle shaped retention/detention basin ~ 180' x 370' (66,600 sq foot) in size, which flows out into a 15" storm water sewer that crosses under US 30 (just north of the Aladdins Oil Change) and resurfaces on the north side of US 30 (behind the Uhaul business) into a smaller retention/detention basin that flows underground from there to the unnamed tributary, which flows to Turkey Creek, which flows to the Deep River which flows to Burns Ditch (Little Calumet River), a navigable water of the U.S and the first Section 10 waterway of this flow route and then flows to Portage/Burns Waterway which flows into Lake Michigan. The 3rd water route through the 27" storm water sewer connects with the first two routes at US 30 (just north of the Aladdins Oil Change.
Tributary stream order, if known: .

(b) General Tributary Characteristics (check all that apply):
Tributary is: ☐ Natural
☐ Artificial (man-made). Explain: .
☒ Manipulated (man-altered). Explain: The site is manipulated between the wetlands and unnamed tributary which leads to Turkey Creek (TNW). It is considered manipulated because two retention/detention basins have been made within this area and it also goes below ground in a storm water sewer before it reaches the unnamed tributary.

Tributary properties with respect to top of bank (estimate):
Average width: 27" and 15" storm water sewers and less than or equal to 3 feet
Average depth: 0.5 feet
Average side slopes: **4:1 (or greater).**

Primary tributary substrate composition (check all that apply):

☒ Silts	☐ Sands	☒ Concrete
☒ Cobbles	☒ Gravel	☐ Muck
☐ Bedrock	☒ Vegetation. Type/% cover:	
☐ Other. Explain:	.	

Tributary condition/stability [e.g., highly eroding, sloughing banks]. Explain: .
Presence of run/riffle/pool complexes. Explain: None. Trib Geom question below needs to be explained in that the storm water sewers are relatively straight, but there is an area that flows through the wetlands located offsite and to the north that is meandering.
Tributary geometry: **Relatively straight**
Tributary gradient (approximate average slope): minimal, basically a flat terrain %

(c) Flow:
Tributary provides for: **Pick List**
Estimate average number of flow events in review area/year: **Pick List**
Describe flow regime: .
Other information on duration and volume: On April 21, 2008 there was flow from the wetland to the unnamed tributary that was documented in photographs 42 - 46 (placement of foam/bubbles). Most likely this area has the majority of its flow after rain events and/or snow melt.

Surface flow is: **Discrete and confined.** Characteristics: See Section III.B.1.ii.a. identify flow route. 27" and 15" storm water sewer and flowing within a specific path within the landscape.

Subsurface flow: **Unknown**. Explain findings: .
☐ Dye (or other) test performed: .

Tributary has (check all that apply):
☒ Bed and banks
☒ OHWM[6] (check all indicators that apply):

☒ clear, natural line impressed on the bank	☐ the presence of litter and debris
☐ changes in the character of soil	☐ destruction of terrestrial vegetation
☒ shelving	☐ the presence of wrack line
☒ vegetation matted down, bent, or absent	☐ sediment sorting
☐ leaf litter disturbed or washed away	☐ scour
☐ sediment deposition	☐ multiple observed or predicted flow events
☐ water staining	☐ abrupt change in plant community
☐ other (list):	

[5] Flow route can be described by identifying, e.g., tributary a, which flows through the review area, to flow into tributary b, which then flows into TNW.
[6] A natural or man-made discontinuity in the OHWM does not necessarily sever jurisdiction (e.g., where the stream temporarily flows underground, or where the OHWM has been removed by development or agricultural practices). Where there is a break in the OHWM that is unrelated to the waterbody's flow regime (e.g., flow over a rock outcrop or through a culvert), the agencies will look for indicators of flow above and below the break.

☐ Discontinuous OHWM.[7] Explain: .

If factors other than the OHWM were used to determine lateral extent of CWA jurisdiction (check all that apply):

☒ High Tide Line indicated by:
- ☐ oil or scum line along shore objects
- ☐ fine shell or debris deposits (foreshore)
- ☐ physical markings/characteristics
- ☐ tidal gauges
- ☐ other (list):

☒ Mean High Water Mark indicated by:
- ☐ survey to available datum;
- ☐ physical markings;
- ☐ vegetation lines/changes in vegetation types.

(iii) Chemical Characteristics:

Characterize tributary (e.g., water color is clear, discolored, oily film; water quality; general watershed characteristics, etc.).

Explain: The headwater wetland located on the subject property is an area devoid of trees as they were recently mecanically removed, note piles of stumps and tree debris located within the upland / nonwetland areas of the site The wetlands on site were dominated with the wetland plant species including, Cornus Sericea, Phalaris arundinacea, Polygonum penslyvanicum and others. The water on April 21, 2008 was clear not muddy, there was very little if any sediment in the flowing water. This wetland is connected to another wetland located to the north west, but it is unclear where this wetland flows. The wetland in question eventually flows/drains into Turkey Creek.

Identify specific pollutants, if known: Specific pollutants are not known, however, it can be assumed that there will be urban runoff, especially since there has been so much development within this area within the past 18 years and more specifically the retention/detention basin collects parking lot storm water from Aladdin Oil Change and the Subaru car dealership, which most definetly contains vehicle oils road salts and grime. Constant development in the area and intended new development will add increased sediments to these tributaries. These watercourses run in and out of retention/detention basins - large storm events will re-suspend sediments in the basins and run them to down stream waters.

[7]Ibid.

(iv) Biological Characteristics. Channel supports (check all that apply):

☒ Riparian corridor. Characteristics (type, average width): Wetland riparian to the north, Previously wooded riparian to the east and west, upland/nonwetland riparian to the south.

☒ Wetland fringe. Characteristics: Emergent wetland fringe.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: amphibian habitat, bird habitat, insect habitat. Site is basically an island of "green" in surrounding developed areas; as such, it does provide habitat fo a certain diversity of animals.

2. Characteristics of wetlands adjacent to non-TNW that flow directly or indirectly into TNW

(i) Physical Characteristics:

(a) General Wetland Characteristics:

Properties:

Wetland size: 3.40 acres

Wetland type. Explain: Emergent headwater wetlands.

Wetland quality. Explain: This wetland is one of a diminishing number of natural, albeit recently cleared of it woody vegitation, that exists within the city limits of Merrillville and/or Schererville, Indiana. So in that capacity this wetland is of high quality. However, the landclearing activities have decreased the quality of these wetlands as wooded wetlands have a higher quality.

Project wetlands cross or serve as state boundaries. Explain: No.

(b) General Flow Relationship with Non-TNW:

Flow is: **Intermittent flow**. Explain: Most likely this area has the majority of its flow after rain events and/or snow melt.

Surface flow is: **Confined**

Characteristics: Drainage way 1 and Drainage way 2. Drainage Way 1 (DW1) is 106 linear feet in length and it flows northwest before flowing into a 27" storm sewer along the western property boundary. DW 1 appears to have been excavated at the same time the storm sewers (associated with the Polo Club Apartments - previously owned by Mr. George Novogroder) were installed. Drainage Way 2 (DW2) is 270 linear feet in length and it flows north and then northwest until it enters the same 27" storm sewer as DW1. It could also be agrued before the landclearing ocurred that there was a dfinete connection between DW2 and the offsite property located to the north which flows directly into the 66,600 sq foot retention/detention basin.

Subsurface flow: **Unknown**. Explain findings: .

☐ Dye (or other) test performed: .

(c) Wetland Adjacency Determination with Non-TNW:

☒ Directly abutting

☐ Not directly abutting

☐ Discrete wetland hydrologic connection. Explain: .

☐ Ecological connection. Explain: .

☐ Separated by berm/barrier. Explain: .

(d) Proximity (Relationship) to TNW

Project wetlands are **15-20** river miles from TNW.

Project waters are **5-10** aerial (straight) miles from TNW.

Flow is from: **Wetland to navigable waters.**

Estimate approximate location of wetland as within the **Pick List** floodplain.

(ii) Chemical Characteristics:

Characterize wetland system (e.g., water color is clear, brown, oil film on surface; water quality; general watershed characteristics; etc.). Explain: The headwater wetland located on the subject property is an area devoid of trees as they were recently mecanically removed, note piles of stumps and tree debris located within the upland / nonwetland areas of the site The wetlands on site were dominated with the wetland plant species including, Cornus Sericea, Phalaris arundinacea, Polygonum penslyvanicum and others. The water on April 21, 2008 was clear not muddy, there was very little if any sediment in the flowing water. This wetland is connected to another wetland located to the north west, but it is unclear where this wetland flows. The wetland in question eventually flows/drains into Turkey Creek, and ultimately flows into the Little Calumet River and Lake Michigan.

Identify specific pollutants, if known: Specific pollutants are not known, however, it can be assumed that there will be urban runoff, especially since there has been so much development within this area within the past 18 years and more specifically the retention/detention basin collects parking lot storm water from Aladdin Oil Change and the Subaru car dealership, which most definetly contains vehicle oils road salts and grime. Bottom elevation of wetland has probably changed from influxes of eroded/run-off borne sediments. Landscaping in area likely adds high amounts of nitrogen and phosphorus to site..

(iii) Biological Characteristics. Wetland supports (check all that apply):

☒ Riparian buffer. Characteristics (type, average width): Before the site, including the wetlands, were cleared of its woody vegetation the wetlands would have been considered a forested wetland and the buffer itself would have incompassed only the 3.4 acre wetland site.

☒ Vegetation type/percent cover. Explain: Emergent.

☒ Habitat for:

☐ Federally Listed species. Explain findings: .

☐ Fish/spawn areas. Explain findings: .

☐ Other environmentally-sensitive species. Explain findings: .

☒ Aquatic/wildlife diversity. Explain findings: amphibian habitat, bird habitat, insect habitat.

3. Characteristics of all wetlands adjacent to the tributary (if any)

All wetland(s) being considered in the cumulative analysis: 3

Approximately (8) acres in total are being considered in the cumulative analysis.

For each wetland, specify the following:

Directly abuts? (Y/N)	Size (in acres)	Directly abuts? (Y/N)	Size (in acres)
y	3.4	y	2.8
y	1.5		

Summarize overall biological, chemical and physical functions being performed: The above three wetlands are located 1) immediately to the west of the wetland / property in question and Polo Club Drive 2) immediately to the north of the wetland / property in question and 3) the 66,6600 square foot retention/detention basin previously mentioned in this document. The wetlands in question were previously part of the larger Polo Club Apartments project that encompased ~56 acre site and 4 wetlands. Three of those wetlands have been impacted to create retention/detention basins while the last wetland (wetland 2) has yet to be determined due to being the wetland in question. The area north of the property in question contains not only historically filled areas (large mature trees were growing on the fill piles), but also wetlands in their natural state. The last wetland consisdered within the cumulative analysis has been excavated to create the 66,600 retention/detention pond. Notes should be made as to the amount of retention/detention basins found within such a small area. This area obviously requires and needs water storage, subsequently additional work within the area will only further the requirement. Continual development of the area has increased the flood potential in an area with an obviously high water table (i.e., the apparent reason for so many retention/detention basins in a relatively small area) and well documented flooding problems. Wetlands do desynchronized flood flows and absorb various pollutants from the rapidly urbanizing landscape.

C. SIGNIFICANT NEXUS DETERMINATION

A significant nexus analysis will assess the flow characteristics and functions of the tributary itself and the functions performed by any wetlands adjacent to the tributary to determine if they significantly affect the chemical, physical, and biological integrity of a TNW. For each of the following situations, a significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or insubstantial effect on the chemical, physical and/or biological integrity of a TNW. Considerations when evaluating significant nexus include, but are not limited to the volume, duration, and frequency of the flow of water in the tributary and its proximity to a TNW, and the functions performed by the tributary and all its adjacent wetlands. It is not appropriate to determine significant nexus based solely on any specific threshold of distance (e.g. between a tributary and its adjacent wetland or between a tributary and the TNW). Similarly, the fact an adjacent wetland lies within or outside of a floodplain is not solely determinative of significant nexus.

Draw connections between the features documented and the effects on the TNW, as identified in the *Rapanos* Guidance and discussed in the Instructional Guidebook. Factors to consider include, for example:

- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to carry pollutants or flood waters to TNWs, or to reduce the amount of pollutants or flood waters reaching a TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), provide habitat and lifecycle support functions for fish and other species, such as feeding, nesting, spawning, or rearing young for species that are present in the TNW?
- Does the tributary, in combination with its adjacent wetlands (if any), have the capacity to transfer nutrients and organic carbon that support downstream foodwebs?
- Does the tributary, in combination with its adjacent wetlands (if any), have other relationships to the physical, chemical, or biological integrity of the TNW?

Note: the above list of considerations is not inclusive and other functions observed or known to occur should be documented below:

1. **Significant nexus findings for non-RPW that has no adjacent wetlands and flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary itself, then go to Section III.D: .

2. **Significant nexus findings for non-RPW and its adjacent wetlands, where the non-RPW flows directly or indirectly into TNWs.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: The 3.4 acre wetland contains two drainage ways that directly lead to either a 27" storm water sewer or leads to the 66,600 square foot retention/detention basin by traversing the property to the north of the project site. The 2002 aerial photographs clearly show the connection between drainage way 2 and the confined flow of that property. Water flows from either the 27" storm water sewer or the 66,600 retention/detention basin to a smaller retention/detention basin north of US 30 and onto the unnamed tributary which flows into Turkey Creek (all of the drainage ways on the site are headwaters to Turkey Creek). Turkey Creek is a perennial RPW and a major tributary to The Deep River, which is a major tributary itself of Burns Ditch (Little Calumet River), a navigable water of the U.S. that empties into Lake Michigan. The Little Calumet River is on the Detroit District's List of navigable waters per Section 329.14 and 329.16. The Chicago District, Corps of Engineers is responsible for dredging a portion of the Portage Burns Waterway.

3.

4. Turkey Creek, Deep River, Burns Ditch (Little Calumet River), Portage Burns Waterway and the shoreline of Lake Michigan are on the Indiana Department of Environmental Managements (IDEM) 303(d) list of impaired waters as approved by the Environmental Protection Agency (EPA) on 21 May 2008 with respect to E. coli, PCB's, Mercury, Impaired Biotic Communities and/or Siltation. And as the 1992 Lake County Soil Suirvey under the drainage section states "The Little Calumet River is the primary drainage channel for the Lake Michigan regional watershed. Much of the land in the northern and southern parts of the county originally was marshy, but now most of these areas are artificailly drained." Removing additional wetlands only compounds the situation, by not allowing the wetlands to function as natures natural filter and ultimately speeding up the transport of these contaminants downstream.
5.
6. The following quote from a 2003/2004 report sums up the issue of E. coli concentration along the shoreline of Lake Michigan: "The Indiana shore includes Indiana Dunes National Lakeshore as well as several other beaches that are used extensively by residents of Indiana and other Midwest states. The shoreline is listed on the Indiana 303(d) list of impaired water for failing to fully support its designated swimmable use due to Escherichia coli (E. coli) impairment (Table 1). The E. coli impairment was identified through data collected by the Indiana Department of Environmental Management (IDEM) and the Inter-Agency Technical Task Force on E. coli (Task Force) that showed violations of the water quality standard. E. coli is a bacterium that indicates the presence of human sewage and animal manure. It can enter water bodies through direct discharge from mammals and birds, from agricultural and storm runoff carrying mammal waste (manure), and from sewage leaked into the water. E. coli is also an indication of the possible presence of other disease causing organisms or pathogens. Violations of the water quality standard resulted in an average of more than 15 beach closures per year at the National Seashore and state park during the 1990 and 2000 period. These beach closures have been associated with adverse recreation and economic cost to the locality" (Tetra Tech, Inc. 2003, report prepared for the IDEM).
7.
8. A 2004 report completed for the IDEM (Earth Tech 2004) reiterated the "nonpoint" nature of E. coli levels in Portage Burns Waterway: "The major source of the E. coli bacteria impairment in the Little Calumet – Portage Burns Waterway appears to be nonpoint sources. Nonpoint sources most likely to be contributing to the impairment of water quality include: failing septic systems, unknown illicit discharges of sewage, wildlife, small agriculture operations, bacteria laden sediments, and urban runoff. Point sources are well below water quality standards. Therefore, point sources of E. coli make up such a small percent of the total load that further reductions would not significantly improve water quality. CSOs are a known source of E. coli and play a major role in the water quality impairment when they occur. However, CSOs did not coincide with the dated of the simulated events, indicating that the waterbody was impaired by other sources in addition to CSOs."
9.
10. A 2000 report from the Indiana Geological Survey suggests that E. coli concentrations move through the stream system as distinct contaminant plumes, which suggests much of the E. coli contamination gets into the watershed in the form of storm event runoff. The wetlands already located in the watershed prevent additional E.coli-laden run-off—and especially large pulses of run-off during storm events—from reaching Turkey Creek, The Deep River, Burns Ditch (Little Calumet River), and Lake Michigan—the elimination of additional wetlands within these headwaters will not assist in the attainment of the IDEM's total maximum daily load (TMDL) for E. coli on Burns Ditch (Little Calumet River), Portage Burns Waterway and Lake Michigan.
11.
12. The Deep River is listed on the Indiana Register of Outstanding Rivers due to its canoe trails and its ecological, recreational, and scenic importance, but it should also be noted that the Deep River flows through one of the most heavily industrialized regions in the world and occasionally suffers from pollution due to that fact as noted by the Indiana Department of Natural Resources. The Deep River is quite muddy and moves very slowly (less than one mile per hour)
13.
14. The East Branch of the Little Calumet River and its tributaries downstream to Lake Michigan via Portage Burns Waterway are designated salmonid waters with public fishing access. It is one of the closest salmonid waters for people from Chicago to use. Sediments and high water levels brought on by storm events can impede the ability to fish these designated waters. Wetlands such as those found in the upper reaches of Turkey Creek do moderate the quantity of storm flow into the Burns Ditch (Little Calumet River) and Portage Burns Waterway and do reduce the sediment load into the Burns Ditch (Little Calumet River) and Portage Burns Waterway. Public monies are being spent to stock the Burns Ditch (Little Calumet River) and Portage Burns Waterway with salmon and steelhead. The wetlands in the Turkey Creek watershed help provide a return on this investment without additional expenditure of public monies.
15.
16. The nexus between Turkey Creek, The Deep River, Burns Ditch (Little Calumet River), Portage Burns Waterway and Lake Michigan is significant and public monies are being spent to counteract the negative aspects of this significant nexus (e.g., E. coli levels in Lake Michigan, sediments loads in Burns Ditch (Little Calumet River)). Turkey Creek and its headwaters wetlands do play a significant role in the chemical, physical, and biological integrity of Salt Creek and Lake Michigan.
17.
18. Most wetlands within the surrounding area of the project site have been altered to retention/detention basins as can be seen in the Polo Club Apartments located just to the west. Not to mention that the project wetlands themselves flow into either a 27" storm water sewer or 66,600 retention/detention basin before heading to yet another smaller retention/detention basin and then on to the unnamed tributary. This area of the world obviously requires and needs large water storage areas due to the loss of wetlands, development needs and natural storm events.
19.
20.
21. Earth Tech, 2004. Little Calumet River and Portage Burns Waterway TMDL for E.coli Bacteria, 64 pp. report prepared for the IDEM http://www.in.gov/idem/programs/water/tmdl/finalrpt/littlecalpbw.pdf

22.
23. Harper, D. and G. Olyphant 2000. Monitoring and Forecasting Outfalls of Streamflow Contaminated by E.coli at the Poratge-Burns Waterway ("Burns Ditch"), Lake Michigan, Indiana. Indiana Geological Survey report http://www.igs.indiana.edu/survey/projects/burns_web/index.cfm
24.
25. Tetra Tech, Inc. 2003. Lake Michigan Shoreline TMDL for E. coil Bacteria Modeling Framework Report, 15 pp. report prepared for the IDEM
26. (http://www.laportecountybeaches.com/resources/pdf/lkmichTMDLfrmwrk.pdf)
27.
28. Appendix F.2 IDEM Listing of Indiana Waters Designated for Special Protection http://www.in.gov/dnr/water/files/appdx_F-2.pdf
29.
30. Impaired Waters – Section 303(d) http://www.in.gov/idem/4680.htm
31.
32. Tetra Tech, Inc. 2004. Lake Michigan Shoreline TMDL for E. coli Bacteria, 58 pp prepare for the IDEM http://www.in.gov/idem/files/tmdl_lakemich_report.doc
33.
34. Online Guide for the Region, Merrillville, Indiana http://www.northwestindiana.com/cities/merrillville.htm.

35. **Significant nexus findings for wetlands adjacent to an RPW but that do not directly abut the RPW.** Explain findings of presence or absence of significant nexus below, based on the tributary in combination with all of its adjacent wetlands, then go to Section III.D: .

D. DETERMINATIONS OF JURISDICTIONAL FINDINGS. THE SUBJECT WATERS/WETLANDS ARE (CHECK ALL THAT APPLY):

1. **TNWs and Adjacent Wetlands.** Check all that apply and provide size estimates in review area:
   - ☐ TNWs: linear feet width (ft), Or, acres.
   - ☐ Wetlands adjacent to TNWs: acres.

2. **RPWs that flow directly or indirectly into TNWs.**
   - ☐ Tributaries of TNWs where tributaries typically flow year-round are jurisdictional. Provide data and rationale indicating that tributary is perennial: .
   - ☐ Tributaries of TNW where tributaries have continuous flow "seasonally" (e.g., typically three months each year) are jurisdictional. Data supporting this conclusion is provided at Section III.B. Provide rationale indicating that tributary flows seasonally: .

   Provide estimates for jurisdictional waters in the review area (check all that apply):
   - ☐ Tributary waters: linear feet width (ft).
   - ☐ Other non-wetland waters: acres.
     Identify type(s) of waters: .

3. **Non-RPWs[8] that flow directly or indirectly into TNWs.**
   - ☒ Waterbody that is not a TNW or an RPW, but flows directly or indirectly into a TNW, and it has a significant nexus with a TNW is jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional waters within the review area (check all that apply):
   - ☒ Tributary waters: **less than one mile** linear feet **27" and 15" and less than or equal to 3 feet** width (ft).
   - ☒ Other non-wetland waters: **~12** acres.
     Identify type(s) of waters: **retention/detention basins.**

4. **Wetlands directly abutting an RPW that flow directly or indirectly into TNWs.**
   - ☐ Wetlands directly abut RPW and thus are jurisdictional as adjacent wetlands.
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow year-round. Provide data and rationale indicating that tributary is perennial in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .
     - ☐ Wetlands directly abutting an RPW where tributaries typically flow "seasonally." Provide data indicating that tributary is seasonal in Section III.B and rationale in Section III.D.2, above. Provide rationale indicating that wetland is directly abutting an RPW: .

[8]See Footnote # 3.

Provide acreage estimates for jurisdictional wetlands in the review area: acres.

5. **Wetlands adjacent to but not directly abutting an RPW that flow directly or indirectly into TNWs.**
   ☐ Wetlands that do not directly abut an RPW, but when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisidictional. Data supporting this conclusion is provided at Section III.C.

   Provide acreage estimates for jurisdictional wetlands in the review area: acres.

6. **Wetlands adjacent to non-RPWs that flow directly or indirectly into TNWs.**
   ☒ Wetlands adjacent to such waters, and have when considered in combination with the tributary to which they are adjacent and with similarly situated adjacent wetlands, have a significant nexus with a TNW are jurisdictional. Data supporting this conclusion is provided at Section III.C.

   Provide estimates for jurisdictional wetlands in the review area: **3.4** acres.

7. **Impoundments of jurisdictional waters.**[9]
   As a general rule, the impoundment of a jurisdictional tributary remains jurisdictional.
   ☐ Demonstrate that impoundment was created from "waters of the U.S.," or
   ☐ Demonstrate that water meets the criteria for one of the categories presented above (1-6), or
   ☐ Demonstrate that water is isolated with a nexus to commerce (see E below).

E. ISOLATED [INTERSTATE OR INTRA-STATE] WATERS, INCLUDING ISOLATED WETLANDS, THE USE, DEGRADATION OR DESTRUCTION OF WHICH COULD AFFECT INTERSTATE COMMERCE, INCLUDING ANY SUCH WATERS (CHECK ALL THAT APPLY):[10]

☐ which are or could be used by interstate or foreign travelers for recreational or other purposes.
☐ from which fish or shellfish are or could be taken and sold in interstate or foreign commerce.
☐ which are or could be used for industrial purposes by industries in interstate commerce.
☐ Interstate isolated waters. Explain: .
☐ Other factors. Explain: .

Identify water body and summarize rationale supporting determination: .

Provide estimates for jurisdictional waters in the review area (check all that apply):
☐ Tributary waters: linear feet width (ft).
☐ Other non-wetland waters: acres.
   Identify type(s) of waters: .
☐ Wetlands: acres.

F. NON-JURISDICTIONAL WATERS, INCLUDING WETLANDS (CHECK ALL THAT APPLY):

☐ If potential wetlands were assessed within the review area, these areas did not meet the criteria in the 1987 Corps of Engineers Wetland Delineation Manual and/or appropriate Regional Supplements.
☐ Review area included isolated waters with no substantial nexus to interstate (or foreign) commerce.
   ☐ Prior to the Jan 2001 Supreme Court decision in "*SWANCC*," the review area would have been regulated based solely on the "Migratory Bird Rule" (MBR).
☐ Waters do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction. Explain: .
☐ Other: (explain, if not covered above): .

Provide acreage estimates for non-jurisdictional waters in the review area, where the sole potential basis of jurisdiction is the MBR factors (i.e., presence of migratory birds, presence of endangered species, use of water for irrigated agriculture), using best professional judgment (check all that apply):
☐ Non-wetland waters (i.e., rivers, streams): linear feet width (ft).
☐ Lakes/ponds: acres.
☐ Other non-wetland waters: acres. List type of aquatic resource: .
☐ Wetlands: acres.

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[9] To complete the analysis refer to the key in Section III.D.6 of the Instructional Guidebook.

[10] **Prior to asserting or declining CWA jurisdiction based solely on this category, Corps Districts will elevate the action to Corps and EPA HQ for review consistent with the process described in the Corps/EPA *Memorandum Regarding CWA Act Jurisdiction Following Rapanos.***

Provide acreage estimates for non-jurisdictional waters in the review area that do not meet the "Significant Nexus" standard, where such a finding is required for jurisdiction (check all that apply):

- ☐ Non-wetland waters (i.e., rivers, streams): linear feet, width (ft).
- ☐ Lakes/ponds: acres.
- ☐ Other non-wetland waters: acres. List type of aquatic resource: .
- ☐ Wetlands: acres.

SECTION IV: DATA SOURCES.

A. SUPPORTING DATA. Data reviewed for JD (check all that apply - checked items shall be included in case file and, where checked and requested, appropriately reference sources below):

- ☒ Maps, plans, plots or plat submitted by or on behalf of the applicant/consultant: 31 Dec 2007 Wetland Delineation Report.
- ☒ Data sheets prepared/submitted by or on behalf of the applicant/consultant.
  - ☒ Office concurs with data sheets/delineation report.
  - ☒ Office does not concur with data sheets/delineation report.
- ☐ Data sheets prepared by the Corps: .
- ☒ Corps navigable waters' study: 18 Jun 1982 Little Calumet River - Burns Waterway.
- ☒ U.S. Geological Survey Hydrologic Atlas: .
  - ☐ USGS NHD data.
  - ☒ USGS 8 and 12 digit HUC maps.
- ☒ U.S. Geological Survey map(s). Cite scale & quad name: 1:24,000; 1992 Crown Point, IN.
- ☒ USDA Natural Resources Conservation Service Soil Survey. Citation: Lake County Soil Survey June 1992 Sheet #27; Web Soil Survey (WSS) soil maps version 2, 14 December 2004 and soil data version 8, 4 September 2007.
- ☒ National wetlands inventory map(s). Cite name: Crown Point, Indiana.
- ☐ State/Local wetland inventory map(s): .
- ☐ FEMA/FIRM maps: .
- ☐ 100-year Floodplain Elevation is: (National Geodectic Vertical Datum of 1929)
- ☒ Photographs: ☒ Aerial (Name & Date): 1:12,000 and 1:3,600 orthophotomap from terrain professional dated 16 July 2003 and 1 April 2002, respectively.
  or ☒ Other (Name & Date): 21 April 2008 site inspection photos; December 2007 site inspection photos .
- ☒ Previous determination(s). File no. and date of response letter: 90-145-117-0, 20 November 1990; 90-145-117-3, 13 May 1996.
- ☐ Applicable/supporting case law: .
- ☐ Applicable/supporting scientific literature: .
- ☐ Other information (please specify): .

B. ADDITIONAL COMMENTS TO SUPPORT JD: This office concurs with the consultants wetland boundary as identified above but does not concur with their statement that the wetlands are isolated as found in the conclusions section of their report. Portions of the property in question had been cleared, filled and graded prior to both the consultants on site delineation and our site visit for verification. The cleared material was stock piled in a couple of upland nonwetland areas of the site. This site was previously delineated in 1990 and was previously issued a NW26 permit which required mitigation. Neither the permit nor the mitigation were ever constructed. A small violation ~0.20 acre exists along the southern edge of the property. Prior to 2006, portions of Northern Indiana, specifically Lake County, Porter County and LaPorte County, were in drought conditions, but in the fall of 2006 that cycle seemed to change and to date precipitation levels are at the norm. The Ordinary High Water Mark of the 27" storm water sewer pipe intersects the wetland making the wetland in question contiguous with the non-TNW tributary identified in Section III B. The wetlands in question are ~17.4 water miles from the TNW, which is more specifically located where Burns Ditch (Little Calumet River) and the I-80/90 toll road bridge cross.